

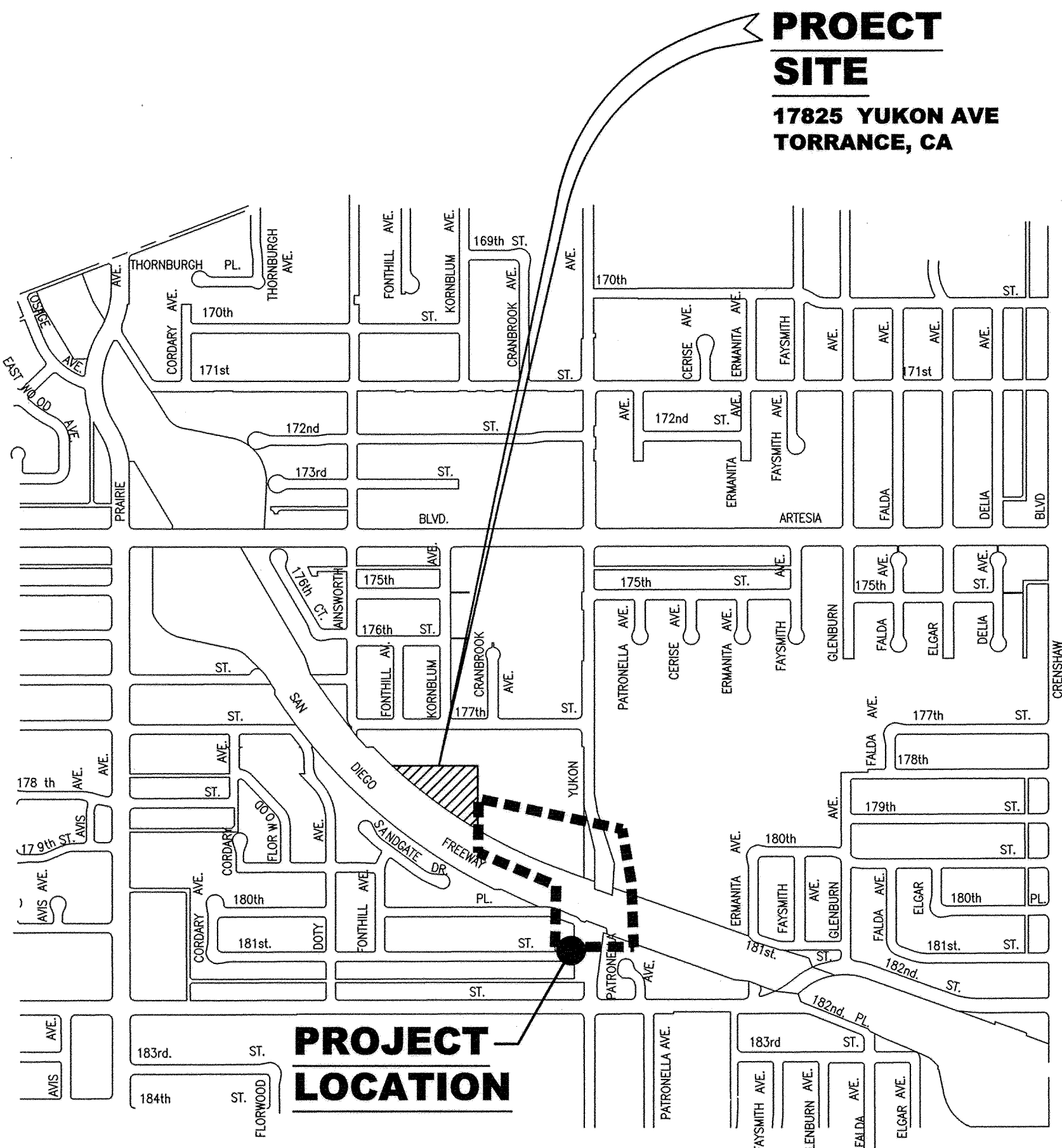
# 100% DESIGN SUBMITTAL

UTILITY CONTACT LIST:

<u>COMPANY</u>	<u>PHONE NO.</u>	<u>CONTACT</u>
SBC/ PACBELL	(310) 515-3470	MARCELLA CORDOZA
TIME WARNER COMMUNICATIONS	(310) 216-3662	MIKE GHIANULY
SOUTHERN CALIFORNIA GAS CO.	(310) 687-2011	PAUL BLOOD
SOUTHERN CALIFORNIA EDISON	(310) 783-9336	MICHAEL GLEN
AT&T LOCAL SERVICES	(714) 845-3522	MARIA GUZMAN
SUNESYS	(951) 278-0400	TRENT HORVATH
WEST BASIN MUNICIPAL WATER	(310) 660-6296	SHERWIN UMALI
TORRANCE MUNICIPAL WATER	(310) 781-6700	ALAN BERNDT

**DRAWING INDEX:**

<u>SHEET</u>	<u>DRAWING</u>	<u>TITLE</u>
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## LOCATION MAP

NO SCALE

## BASIS OF BEARINGS

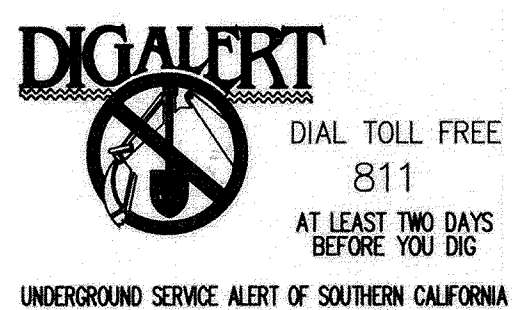
THE BEARINGS SHOWN HEREON ARE BASED ON THE  
CENTERLINE OF YUKON AVENUE, BETWEEN FOUND MONUMENTS  
AT 177TH STREET AND 175TH STREET,  
BEING N0°09'11"E.

COORDINATE DATUM

COORDINATES SHOWN ARE BASED ON THE CALIFORNIA  
COORDINATE SYSTEM (CCS83), ZONE V, 1983 NAD, 2007.0  
EPOCH GPS ADJUSTMENT.

## BENCHMARK

LOS ANGELES COUNTY BENCHMARK Y 6942  
ELEV. 57.500 NAVD83  
TORRANCE QUAD 1995  
FOUND LEAD AND BENCH NAIL IN THE WEST CURB OF  
CRENSHAW BLVD., 2.0 FEET NORTH OF THE BEGIN CURB  
RETURN AT THE SOUTHWEST CORNER OF CRENSHAW BLVD.  
AND ARTESIA BLVD., 65 FEET SOUTH OF THE CENTERLINE OF  
ARTESIA BLVD. AND 38 FEET WEST OF THE CENTERLINE OF  
CRENSHAW BLVD.

[illegible]



## GENERAL CONSTRUCTION NOTES

3. A GENERAL PERMIT TO DISCHARGE STORM WATER SHALL BE OBTAINED FROM THE STATE WATER RESOURCES CONTROL BOARD FOR THE CITY OF TORRANCE (SWRCB) PER SECTION 8.0 OF THE CONTRACT SPECIFICATIONS.
2. ALL WORK SHALL CONFORM TO THE CITY OF TORRANCE STANDARD PLANS AND LATEST EDITION OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" AND SUPPLEMENTS THERETO (APWA "GREEN BOOK") UNLESS SPECIFICALLY NOTED OTHERWISE.
3. THE CONTRACTOR SHALL HAVE A COPY OF THE APPROVED CONTRACT DOCUMENTS, CONSTRUCTION PERMIT AND RELEVANT STANDARD PLANS ON THE JOB AT ALL TIMES.
4. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT AT "811" TO LOCATE ALL EXISTING PIPELINE AND UTILITIES AT LEAST 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
5. THE CONTRACTOR SHALL NOTIFY THE CITY'S CONSTRUCTION MANAGER A MINIMUM OF 5 DAYS PRIOR TO THE START OF CONSTRUCTION AND AT LEAST 48 HOURS IN ADVANCE FOR BUILDING AND SAFETY PROJECT INSPECTION. INSPECTION HOURS ARE BETWEEN 7:00 AM AND 5:00 PM MONDAY THROUGH FRIDAY, EXCLUDING HOLIDAYS.
6. THE CONTRACTOR SHALL POTHOLE AND VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING INTERFERING FACILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BEAR THE ENTIRE COST OF REPAIRING OR REPLACING ANY OF SAID STRUCTURES DAMAGED DURING PROSECUTION OF THE WORK. ALL REPAIRS AND REPLACEMENTS SHALL BE DONE IN THE PRESENCE OF THE INSPECTOR. ALL LOCATIONS SHOWN ON THE PLAN FOR UTILITY LINES HAVE BEEN TAKEN FROM AVAILABLE RECORDS AND THEIR COMPLETENESS AND CORRECTNESS ARE IN NO WAY GUARANTEED.
7. ALL WORK SHALL BE PERFORMED WITHIN THE CITY CONTROLLED OR PERMITTED PROJECT RIGHT OF WAY UNLESS NOTED OTHERWISE. ALL WORK WITHIN PUBLIC RIGHT OF WAY OR EASEMENTS REQUIRES THAT A PERMIT BE OBTAINED FROM THE CITY OF TORRANCE COMMUNITY DEVELOPMENT DEPARTMENT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TESTING INCLUDING SOIL COMPACTION AND CONCRETE.
9. THE CONTRACTOR SHALL COMPLY WITH THE STATE DEPARTMENT OF PUBLIC HEALTH CRITERIA FOR THE SEPARATION OF WATER MAINS AND SANITARY SEWERS AS SET FORTH IN SECTION 64630. TITLE 22 OF THE CALIFORNIA ADMINISTRATIVE CODE AND THE CITY OF TORRANCE STANDARD PLAN T714.
10. WORKING HOURS ARE 24 HOURS PER DAY, MONDAY THROUGH FRIDAY AND 9AM TO 5PM ON SATURDAY, EXCLUDING HOLIDAYS WITHIN CONSTRUCTION EASEMENTS. WORKING HOURS ARE 9:00AM TO 4:00PM WITHIN YUKON AVENUE RIGHT OF WAY.
11. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL SAFETY REQUIREMENTS.
12. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING IMPROVEMENTS, FROM DAMAGE. ALL IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO STREET STRIPING, LANDSCAPING, AND SIGNS DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE EXPEDITIOUSLY REPAIRED OR RECONSTRUCTED TO THE CITY'S SATISFACTION AT THE CONTRACTOR'S EXPENSE WITHOUT ANY ADDITIONAL COMPENSATION.
13. THIS IS PHASE I OF THE NORTH TORRANCE WELL FIELD PROJECT. CONTRACTOR SHALL GUARANTEE ALL WORK PERFORMED FOR A ONE YEAR PERIOD FROM DATE OF SYSTEM OPERATION.
14. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE CITY OF TORRANCE, CALTRANS, SCAQMD, AND ANY OTHER AGENCY HAVING JURISDICTION ON THIS PROJECT, PRIOR TO START OF CONSTRUCTION,
15. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES AND STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THE CONTRACTOR SHALL POTHOLE AND VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITY LINES IN AND ADJACENT TO THE CONSTRUCTION AREA. THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ALL UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE AGENCY THE UNDERGROUND SERVICE ALERT IDENTIFICATION FORM WHICH IS PROVIDED IN THE SPECIFICATIONS.
16. A PRE-CONSTRUCTION MEETING SHALL BE HELD A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF WORK.
17. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE AND SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES AND PROPERTIES RESULTING DIRECTLY OR INDIRECTLY FROM HIS OPERATIONS WHETHER OR NOT SUCH FACILITIES ARE SHOWN ON THESE PLANS.
18. THE CONTRACTOR'S ATTENTION IS EXPRESSLY DIRECTED TO ALL REQUIREMENTS AND PROVISIONS OF THE STATE OF CALIFORNIA SAFETY REGULATIONS. CONFORMANCE SHALL BE STRICTLY AND CONTINUOUSLY ENFORCED DURING THE ENTIRE LIFE OF THE CONTRACT.
19. THE CONTRACTOR SHALL DISPOSE OF ALL REMOVED MATERIALS IN AN AREA OUTSIDE THE PROJECT SITE AND PERMITTED BY ALL AGENCIES AND PROPERTY OWNER OR AS DIRECTED BY THE ENGINEER.
20. ALL UTILITY CONDUITS AND PIPES AND APPURTENANT MATERIALS AND WORK SHALL BE CONSTRUCTED BY THE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
21. BASIS OF BEARINGS, BENCHMARK, AND FIELD SURVEY PREPARED BY BUSH & ASSOCIATES LAND SURVEYORS IN DEC 2010. BUSH & ASSOCIATES ARE LOCATED AT 18017 SKY PARK CIRCLE, SUITE Q, IRVINE, CALIFORNIA 92614 PHONE (949) 752-1888.
22. OVERHEAD UTILITY LINE CAUTION: IF CONSTRUCTION REQUIRES WORKERS AND/OR EQUIPMENT TO BE WITHIN 6 FEET OF CRANES OR HOISTING DEVICES TO BE WITHIN 10 FEET OF OVERHEAD ELECTRIC/UTILITY LINES CALL SOUTHERN CALIFORNIA EDISON CO. AT 310-783-9336.
23. STATIONS SHOWN ARE HORIZONTAL PROJECTIONS ALONG CENTERLINE OF PIPE.
24. PRIOR TO COMMENCEMENT OF WORK, ALL SURVEY MONUMENTS IN THE PROJECT AREA SHALL BE LOCATED AND TIED OUT. ALL CENTERLINE MONUMENTS OR TIES LOST OR DESTROYED BY THIS WORK SHALL BE REPLACED EITHER BY A LICENSED SURVEYOR OR A CIVIL ENGINEER REGISTERED PRIOR TO JANUARY 1, 1982 AND NEW TIE SHEETS PROVIDED. METHOD OF ESTABLISHMENT SHALL BE STATED ON THE TIE SHEET.
25. GRADE SHEETS PREPARED AND STAMPED BY A LICENSED ENGINEER OR SURVEYOR SHALL BE DELIVERED TO THE INSPECTOR 24 HRS PRIOR TO COMMENCEMENT OF WORK.
26. THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT AT 310-781-6900 PRIOR TO TRIMMING OR REMOVING ANY EXISTING TREES.
27. THE CONTRACTOR SHALL MAKE AVAILABLE FOR THE INSPECTOR'S REVIEW, ON A DAILY BASIS, AS-BUILT DRAWINGS FOR WORK PERFORMED UP TO AND INCLUDING THE PREVIOUS DAYS ACTIVITIES. WORK SHALL NOT BE CONSIDERED AS COMPLETE UNTIL AS-BUILT DRAWINGS ARE SUBMITTED TO AND ACCEPTED BY THE ENGINEER.

## NPDES NOTES

1. SEDIMENT FROM AREAS DISTURBED BY CONSTRUCTION SHALL BE RETAINED ON SITE USING STRUCTURAL CONTROLS AS REQUIRED BY THE STATEWIDE GENERAL CONSTRUCTION STORMWATER PERMIT.
2. STOCKPILES OF SOIL SHALL BE PROPERLY CONTAINED TO MINIMIZE SEDIMENT TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES OR ADJACENT PROPERTIES VIA RUNOFF, VEHICLE TRACKING, OR WIND AS REQUIRED BY THE STATEWIDE GENERAL CONSTRUCTION STORMWATER PERMIT.
3. APPROPRIATE BMP'S FOR CONSTRUCTION RELATED MATERIALS, WASTES, SPILLS OR RESIDUES SHALL BE IMPLEMENTED TO MINIMIZE TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES, OR ADJOINING PROPERTY BY WIND OR RUNOFF AS REQUIRED BY THE STATEWIDE GENERAL CONSTRUCTION STORMWATER PERMIT.
4. RUNOFF FROM EQUIPMENT AND VEHICLE WASHING SHALL BE CONTAINED AT THE CONSTRUCTION SITES AND MUST NOT BE DISCHARGED TO RECEIVING WATERS OR TO THE LOCAL STORMDRAIN SYSTEM.
5. ALL CONSTRUCTION PERSONNEL NEED TO BE MADE AWARE OF THE REQUIRED BEST MANAGEMENT PRACTICES AND GOOD HOUSEKEEPING MEASURES FOR THE PROJECT SITE AND ANY ASSOCIATED CONSTRUCTION STAGING AREAS.
6. AT THE END OF EACH DAY OF CONSTRUCTION ACTIVITY ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS SHALL BE COLLECTED AND PROPERLY DISPOSED IN TRASH OR RECYCLE BINS.
7. CONSTRUCTION SITES SHALL BE MAINTAINED IN SUCH A CONDITION THAT A STORM DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE. DISCHARGES OF MATERIALS OTHER THAN STORMWATER (NON-STORMWATER DISCHARGES) ARE PROHIBITED EXCEPT AS AUTHORIZED BY AN INDIVIDUAL NPDES PERMIT OR THE STATEWIDE GENERAL CONSTRUCTION STORMWATER PERMIT.
8. POTENTIAL POLLUTANTS INCLUDE, BUT ARE NOT LIMITED TO: SOLID OR LIQUID CHEMICAL SPILLS, WASTES FROM PAINTS, STAINS, SEALANTS, SOLVENTS, DETERGENTS, GLUES, LIME, PESTICIDE, HERBICIDE, FERTILIZERS, WOOD PRESERVATIVES AND ASBESTOS FIBERS, PAINT FLAKES OR STUCCO FRAGMENTS; FUELS, OILS, LUBRICANTS, AND HYDRAULIC, RADIATOR OR BATTERY FLUIDS; CONCRETE, AND RELATED CUTTING OR CURING RESIDUES; FLOATABLE WASTES; WASTES FROM ENGINE / EQUIPMENT STEAM CLEANING OR CHEMICAL DEGREASING; WASTES FROM STREET CLEANING; AND SUPER-CHLORINATED POTABLE WATER FROM LINE FLUSHINGS AND TESTING.
9. DURING CONSTRUCTION, DISPOSAL OF SUCH MATERIALS SHOULD OCCUR IN A SPECIFIED AND CONTROLLED, TEMPORARY AREA ON-SITE AND PHYSICALLY SEPARATED FROM POTENTIAL STORMWATER RUNOFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
10. DISCHARGING CONTAMINATED GROUNDWATER, PRODUCED BY DEWATERING GROUNDWATER THAT HAS INFILTRATED INTO THE CONSTRUCTION SITE IS PROHIBITED. DISCHARGING OF CONTAMINATED SOILS VIA SURFACE EROSION IS ALSO PROHIBITED. DISCHARGING NON-CONTAMINATED GROUNDWATER PRODUCED BY DEWATERING ACTIVITIES REQUIRES A NATIONAL POLLUTANTS DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FROM THE LOCAL STATE REGIONAL WATER QUALITY CONTROL BOARD.

## GENERAL WATER NOTES

1. NOTIFY WATER OPERATIONS INSPECTION OFFICE 48 HOURS BEFORE START OF WORK AT (310) 781-6700.
2. THRUST BLOCKS ARE REQUIRED ON ALL UNRESTRAINED FITTINGS OR VALVES. TIE BARS IN THRUST BLOCKS SHALL BE #4 COATED REBAR OR 316 STAINLESS STEEL. PROVIDE ACI STANDARD HOOKED ENDS.
3. DEFECTIVE WORK SHALL BE REMOVED AND CORRECTED WITHIN 24 HOURS FOLLOWING WRITTEN NOTIFICATION BY WATER DIVISION INSPECTOR.

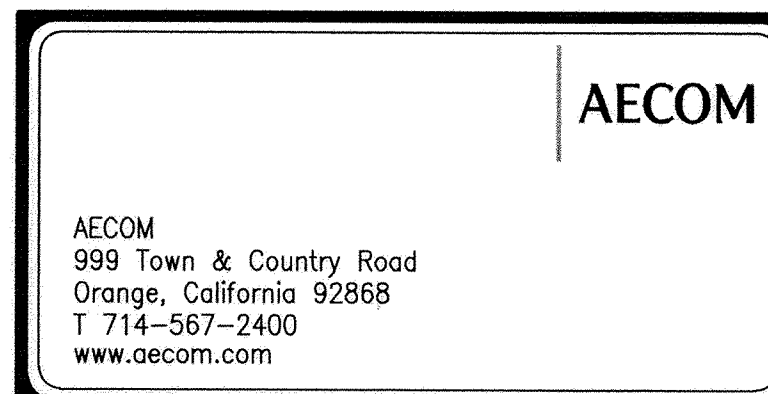
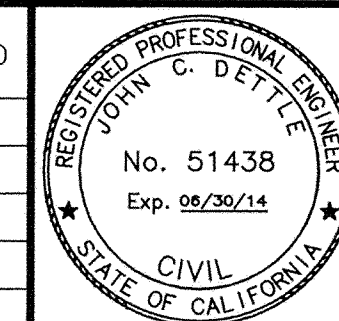
## NORTH TORRANCE WELL FIELD PROJECT PHASE I

### GENERAL NOTES

G-002



 DIAL TOLL FREE  
811  
AT LEAST TWO DAYS  
BEFORE YOU DIG  
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

[illegible]

<p align="center"><b>CITY OF TORRANCE</b> <b>PUBLIC WORKS DEPARTMENT</b></p>			
DRAWN: S. KIVRIZIS		APPROVED: <i>[Signature]</i> 5/2/13	
DESIGNED: C. R. HULSE		TOUFIC J. SEMAAN, PE ACTING CITY ENGINEER RCE #59226 EXP. 6/30/13	
PROJECT ENGINEER: <i>[Signature]</i> EMMAUEL MARTIN		DATE:	
ENGINEERING MANAGER: <i>[Signature]</i> JOHN C. DUFFLE P.E.		SCALE: AS SHOWN SHEET <u>2</u> OF <u>10</u>	
		PLAN NO. <b>WP-297</b>	







CONCRETE ENCASE ALL CONDUITS; ELECTRICAL CONDUITS  
PER SCE REQUIREMENTS.

PULL BOXES TO COMPLY WITH SCE REQUIREMENTS.

CONDUIT SHALL BE PVC SCHEDULE 40, 90% RISE RATING, CONFORMING TO NEMA TC-2 TYPE EC-40 AND UL 651. COUPLINGS TO BE FACTORY-MADE IN ACCORDANCE WITH NEMA TC-2 AND TC-3. USE JOINT CEMENT AS RECOMMENDED BY MANUFACTURER, MANUFACTURERS: CARLON, CONDUX OR EQUAL. PROVIDE MINIMUM 200 POUND STRENGTH PULL CORD IN EACH CONDUIT.

PROVIDE MINIMUM 24" COVER.



SCALE: 1"=4'

A  
C-101

① 16" INLET PIPELINE-CMLCSP \*  
 ② BLIND FLANGE  
 ⑥ 24" OUTLET PIPELINE-CMLCSP \*  
 ⑧ 30" OVERFLOW (DRAIN) LINE-RCP OR HDPE. SEE PROFILE ON DWG C-201. PIPE BEDDING PER TORRANCE STD NO. T302. FOR HDPE, BEDDING A AND B TO BE CLSM. \*  
 ⑩ DRAIN MANHOLE  
 ⑪ 6" SEWER-VCP. PIPE BEDDING PER TORRANCE STD NO. T204. BEDDING MATERIAL TO BE CLSM.  
 ⑫ SEWER MANHOLE. SEE SPPWC STD PLAN 200-3  
 ⑬ 2-5" CO (ELECTRICAL). SEE CONDUIT NOTES ON DWG C-102  
 ⑭ 1-4" CO (TELEPHONE). SEE CONDUIT NOTES ON DWG C-102  
 ⑮ 3'X5'X3' DEEP PULL BOX  
 ⑯ 2'X3'X3' DEEP PULL BOX  
 ⑰ 12" BLEND PIPELINE - DIP \*

YUKON  
ELEMENTARY  
SCHOOL

## PLAN

SCALE: 1"=40'

**NORTH TORRANCE WELL FIELD PROJECT PHASE I**

## OFFSITE PIPING PLAN

C-102

CITY OF TORRANCE  
PUBLIC WORKS DEPARTMENT

DRAWN: S. KIVRIZIS

DESIGNED: C. R. HULSE

PROJECT ENGINEER: E. Martin  
EMMANUEL MARTIN

ENGINEERING  
MANAGER: John C. Dettl  
JOHN C. DETTL, P.E.


APPROVED:
-----------

TOUFIC J. SEMAAN, PE  
ACTING CITY ENGINEER  
RCE #59226  
EXP. 6/30/13

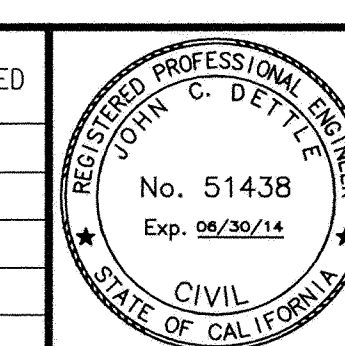
SCALE: AS SHOWN SHEET 4 OF 10




PLAN NO. WP-297



 DIAL TOLL FREE  
811  
AT LEAST TWO DAYS  
BEFORE YOU DIG

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

[illegible]

CITY OF TORRANCE PUBLIC WORKS DEPARTMENT			
DRAWN: S. KIVRIZIS		APPROVED:  5/2/13	
DESIGNED: C. R. HULSE		TOUFIC J. SEMAAN, PE ACTING CITY ENGINEER RCE #59226 EXP. 6/30/13	
PROJECT ENGINEER:  EMMANUEL MARTIN		DATE: 5/2/13	
ENGINEERING MANAGER:  JOHN C. DETTLE, P.E.		SCALE: AS SHOWN SHEET 4 OF 10	
		PLAN NO. WP-297	




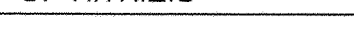
**CONSTRUCTION NOTES:**

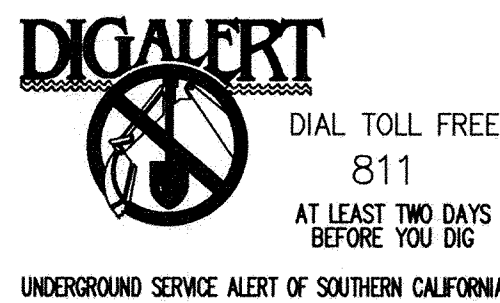
- |   |              | PIPELINE ENDS |            |            |          |
|---|--------------|---------------|------------|------------|----------|
|   | DESCRIPTION  | STATION       | NORTH      | EAST       | INV. FL. |
| A | 6" SEWER     | 52+97         | 1774696.04 | 6459254.21 | 66.3     |
| B | 20" INLET    | 24+06         | 1774672.39 | 6459263.29 | 66.0     |
| C | 24" OUTLET   | 71+86         | 1774668.14 | 6459264.12 | 62.0     |
| D | 30" OVERFLOW | 32+22         | 1774663.64 | 6459263.8  | 63.3     |
| E | 12" BLEND    | 10+00         | 1774675.93 | 6459263.26 | 66.0     |
- 
- END PAVEMENT  
2' PAST R
- SEE C-201 FOR PROFILE (8)
- SEE C-203 FOR PROFILE (11)
- ACCESS EASEMENT
- 54+00
- 10+00
- 24+06
- 32+22
- 71+86
- 52+97
- 10
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## NORTH TORRANCE WELL FIELD PROJECT PHASE I

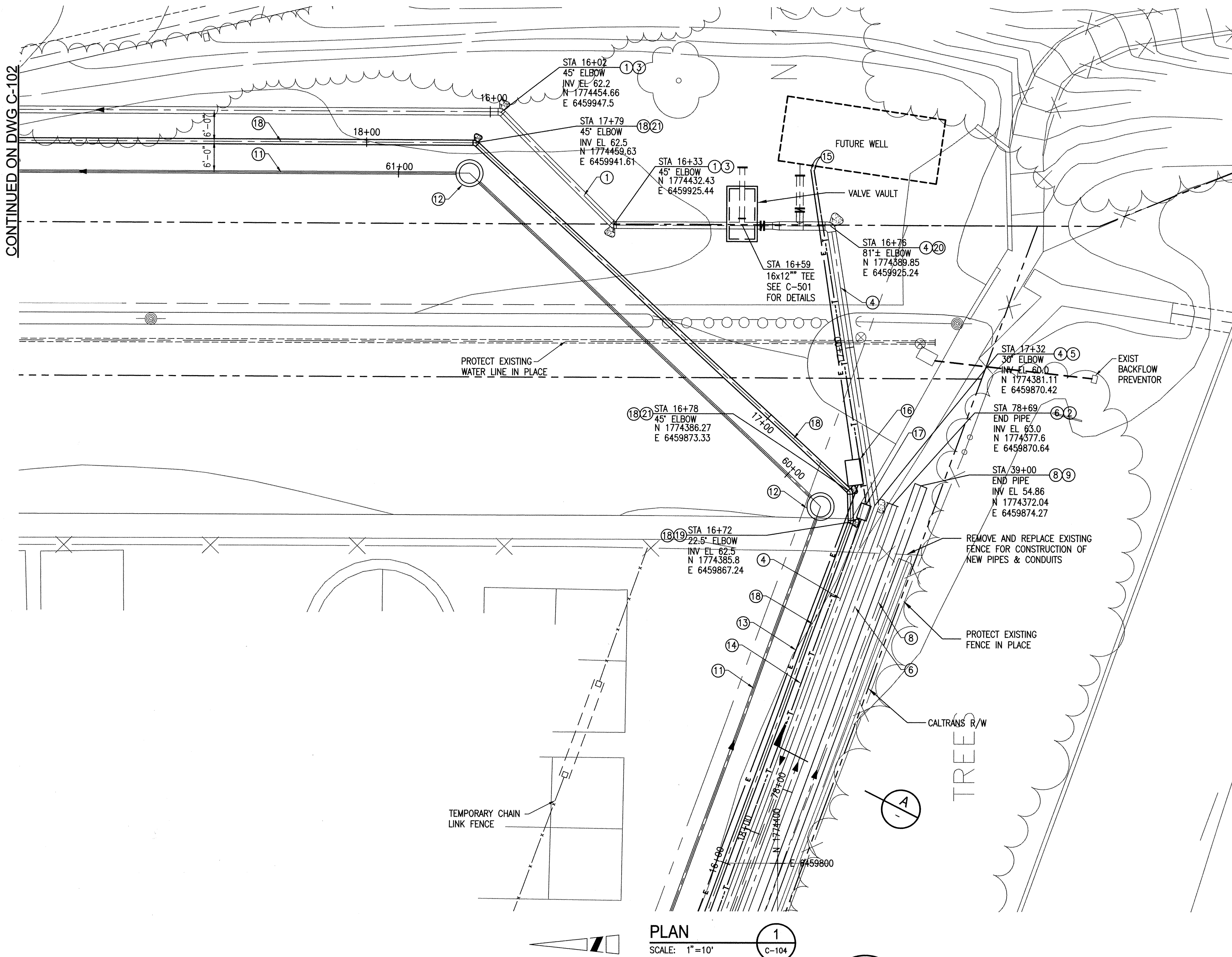
## PIPING DETAIL 1

C-103

REV.	DATE	DESCRIPTION	BY	CHECKED		CITY OF TORRANCE PUBLIC WORKS DEPARTMENT		
						DRAWN: S. KIVRIZIS	APPROVED:	
						DESIGNED: C. R. HULSE	 5/2/13	
						PROJECT ENGINEER:  EMMANUEL MARTIN	TOUFIC J. SEMAAN, PE      DATE: ACTING CITY ENGINEER RCE #59226 EXP. 6/30/13	
						ENGINEERING MANAGER:  JOHN C. DETTLE, P.E.	SCALE: AS SHOWN   SHEET 5 OF 10	PLAN NO. WP-297

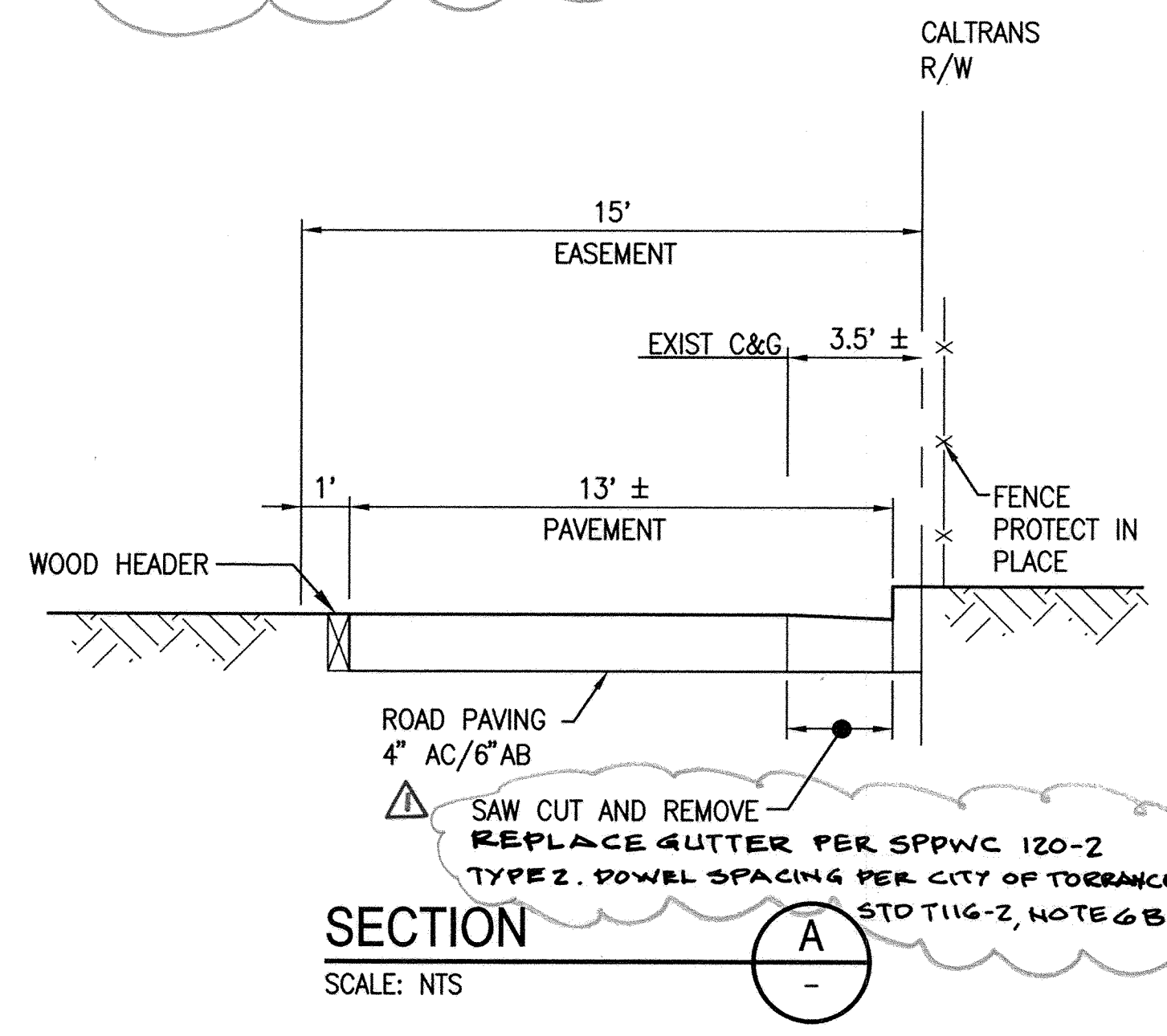






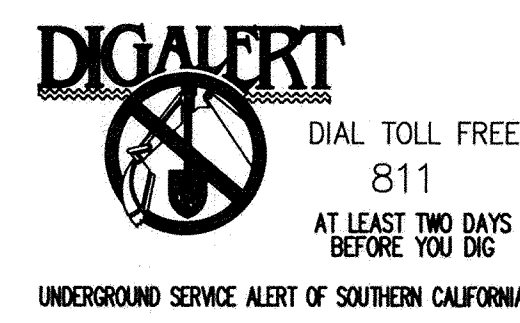
# CONSTRUCTION NOTES:

- ① 16" INLET PIPELINE-CMLCSP \*
  - ② BLIND FLANGE
  - ③ CONCRETE THRUST BLOCK (AREA = 19 S.F.)
  - ④ 20" INLET PIPELINE-CMLCSP \*
  - ⑤ CONCRETE THRUST BLOCK (AREA = 19 S.F.)
  - ⑥ 24" OUTLET PIPELINE-CMLCSP \*
  - ⑦ PLUG/CAP END OF SEWER
  - ⑧ 30" OVERFLOW (DRAIN) LINE-RCP OR HDPE. SEE PROFILE ON DWG C-201. PIPE BEDDING PER TORRANCE STD NO. T302. FOR HDPE, BEDDING A AND B TO BE CLSM.
  - ⑨ WRAP END OF PIPE WITH POLYETHYLENE AND COVER WITH 1" PLYWOOD
  - ⑩ 6" SEWER-VCP. PIPE BEDDING PER TORRANCE STD NO. T204. BEDDING MATERIAL TO BE CLSM.
  - ⑪ SEWER MANHOLE. SEE SPPWC STD PLAN 200-3
  - ⑫ 2-5" CO (ELECTRICAL). SEE CONDUIT NOTES ON DWG C-102
  - ⑬ 1-4" CO (TELEPHONE). SEE CONDUIT NOTES ON DWG C-102
  - ⑭ CAP CONDUITS
  - ⑮ 3'X5'X3' DEEP PULL BOX
  - ⑯ 2'X3'X3' DEEP PULL BOX
  - ⑰ 12" BLEND PIPELINE - DIP \*
  - ⑱ CONCRETE THRUST BLOCK (AREA 6 S.F.)
  - ⑲ CONCRETE THRUST BLOCK (AREA 48 S.F.)
  - ⑲ CONCRETE THRUST BLOCK (AREA 11 S.F.)
- \* PIPE BEDDING PER TORRANCE STD NO. T701.  
**RESTRAIN ALL JOINTS**



## NORTH TORRANCE WELL FIELD PROJECT PHASE I PIPING DETAIL 2

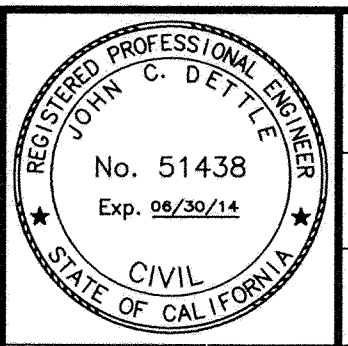
C-104



**AECOM**

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 999 Town & Country Road  
 Orange, California 92668  
 T 714-567-2400  
 www.aecom.com

REV.	DATE	DESCRIPTION	BY	CHECKED
Δ	5/2/13	UPDATED NOTES	E.M.	JP



CITY OF TORRANCE PUBLIC WORKS DEPARTMENT	
DRAWN: S. KIVRIZIS	APPROVED:
DESIGNED: C. R. HULSE	<i>[Signature]</i> 5/2/13
PROJECT ENGINEER: <i>E. Martin</i> EMMANUEL MARTIN	TOUFIC J. SEMAAN, PE ACTING CITY ENGINEER RCE #59226 EXP. 6/30/13
ENGINEERING MANAGER: <i>[Signature]</i> JOHN C. DETTLE, P.E.	SCALE: AS SHOWN SHEET 6 OF 10
PLAN NO. WP-297	





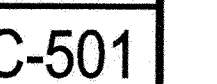
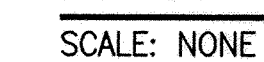
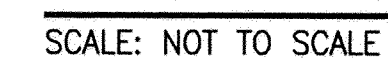
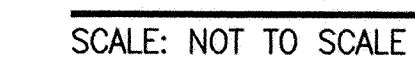





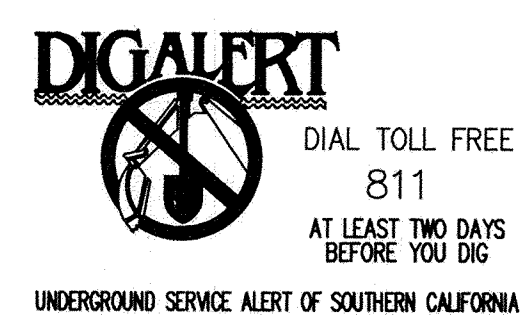








<div style="text-align: right;">C-5001</div> <h2 style="text-align: center;">CITY OF TORRANCE PUBLIC WORKS DEPARTMENT</h2>	
DRAWN: T. R. SY	APPROVED:
DESIGNED: C. R. HULSE	 5/2/13
PROJECT ENGINEER: <u>E. Martin</u> EMMANUEL MARTIN	TOUFIC J. SEMAAN, PE ACTING CITY ENGINEER RCE #59226 EXP. 6/30/13
DATE:	
ENGINEERING MANAGER: <u>John C. Pette</u> JOHN C. PETTE, P.E.	SCALE: AS SHOWN SHEET <u>10</u> OF <u>10</u>  PLAN NO. <b>WP-297</b>



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